**Artificial Islands and Islophilia**

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**Introduction**

In his accounts of pre-war life on Corfu and post-war Rhodes, the English writer Lawrence Durrell identifies a hitherto unrecognized condition called ‘islomania’, which has the effect of making islands irresistible to its sufferers. In *Reflections on a Marine Venus*, the author offers his readers an ‘anatomy of islomania’, a journey of self-exploration and spiritual evaluation. The island was the perfect setting because it represented ‘visionary intimations of solitude, of loneliness, of introspection because at heart everyone vaguely feels that the solitude they offer corresponds to his or her inner sense of aloneness’ (Durrell, 1943: 3). For the young and adventurous Durrell, the islands of Greece were places to experiment; not only in terms of self-development but also his craft as a poet, travel writer and novelist.

Fascinated by ancient Greece and Shakespeare’s last play *The Tempest* (a play about a remote island, shipwreck, and the state of the human soul), Durrell’s ruminations in *Prospero’s Cell* capture well the author’s tortured relationship with the island and the self, as he had to flee the islands of Greece in 1941 when news broke of a German invasion (Durrell, 1945). Exiled for four years, like Prospero in *The Tempest*, and hungry for his former island life, Durrell eventually returned to Rhodes as a post-war information officer working for the British government who exercised ‘artificial’ sovereignty over the Greek islands between 1945 and 1947. Durrell’s return to Greece formed the basis for *Reflections on a Marine Venus*. Here he argues that the island per se holds out the promise for better things from life, and perhaps this became all the more poignant for the writer who lived with a daughter bedevilled with mental illness. In 1952, he moved to Cyprus to take up a position as a teacher. Local political events proved to be incommensurate with family life as communal violence erupted between Greek and Turkish communities. British colonial authority became increasingly tenuous, as Durrell recorded in his 1957 memoir of the island, *Bitter Lemons of Cyprus* (Durrell, 1957). Unfortunately, Cyprus proved to offer only temporary sanctuary for Durrell and his young daughter. Their troubled and possibly incestuous relationship later on in life may well have contributed to her suicide at the age of 33 in London, on the island of Britain.

D. H. Lawrence had the Scottish writer Compton Mackenzie and his musings on the harsh Scottish Hebrides in mind when he penned his short story, ‘The Man who loved islands’ (Lawrence, 1928). In contrast, Durrell’s novelist imagination offers us, his readers, a series of sensual and affecting evocations of social and cultural life with ‘flat alluvial coastlines’ and the ‘long carved coastlines’ separating other human activities transiting through the Mediterranean. In Lawrence’s literary world, the island is a reassuringly fixed territory with largely clear-cut divisions. But, for Durrell, islands like Cyprus endured the bedlam of ethnic and communal strife, with deep social and geopolitical qualities of the place itself nested within a beguiling unitary geography (Sozen, 2013). The battle over Cyprus was one that many states and communities recognised as about rival projects regarding self-determination rather than geo-formation. Communities may come and go, but Cyprus, as a particular geological outcome of a collision between the southern margin of the Anatolian Plate and the African Plate, will endure.

While tectonic forces, climate forcing, and episodes of advancing and retreating ice sheets would appear to have played little part in their creation, artificial islands have been integral to human settlement and development. Regardless of their material provenance, a medley of adventurers, dreamers, runaways, settlers, commercial opportunists and geopolitical plotters have been enchanted with their possibilities. Islands have often acted as natural and artificial laboratories: places to identify and audit life and its evolution (Dodds and Royle, 2003). While many of us are well-versed with stories of islands that do not exist – including fantasy islands and ‘fake islands’ – the figure of the artificial island continues to be ‘harvested’ and peddled for its creative potential. Today more than ever, it performs as a proverbial promised land.

From the artificial island projects that are to be found in such offshore gated communities as in Dubai, to such geopolitical posturing and land reclamation projects underway in the South China Sea, we find plenty of evidence of what Durrell terms as ‘indescribable intoxication’ (Durrell 1943, Stephens 2016). As with their natural counterparts, or perhaps even more than them, human-made islands are spaces of desire and possession. Self-enclosure and separation from the continent feed dreams of escapism, control and autonomy. At the same time, however, artificial islands are also different from other islands. Hybrid creations of water and concrete, of sand and technology, they problematize traditional understandings of nature and wilderness as external to (or separated from) humans (Cronon, 1995; Whatmore, 2002). Artificial islands are expressions and icons of the anthropocene, a term coined to denote the present epoch, in which many geologically significant conditions and processes are profoundly altered by human activities (Crutzen and Stoermer, 2000).

This chapter initially attempts to define artificial islands as a category of geographical features, while at the same time acknowledging the fluidity of the boundaries between artificial and natural (islands). What makes the artificial island distinct and different from a natural island is a key theme of this section. Our second section turns to a more geopolitical-legal register and considers how artificial islands have been caught up in distinct projects designed to reinforce sovereign rights in the disputed waters of the South China Sea. At the heart of these earthly machinations are the entitlements that coastal states derive from the United Nations Law of the Sea Convention and the distinctions made between natural and artificial islands. It would be no exaggeration to claim that China, Philippines and Vietnam are gripped by the exclamatory potential of artificial islands: they may not love them, but they certainly see a great deal of infrastructural and legal-geopolitical value in their existence. Thereafter, we interrogate the role of artificial islands in primarily the western cultural imagination and the roots of their promissory, utopian potential. Finally, we conclude the chapter by discussing why artificial islands continue to fascinate and inspire our geographical imaginations as we face the accumulating consequences of global warming and further earthly change.

**What is an artificial island?**

There seems to be nothing ambiguous about islands. Sixteenth-century Tuscan polygraph Thomaso Porcacchi called an island ‘that land that is surrounded by water all around; I mean, that which is separated and divided from the mainland and is encircled by the sea’ (Porcacchi, 1572: prohemio, n.p.). Challenging Isidore of Seville’s 7th-century etymology, according to which the word island came from the phrase ‘*in salo*’ (in the sea) (Is. XIV.6), Porcacchi nonetheless extended his definition to portions of land encompassed by other bodies of water, such as lakes. Today the Cambridge and Oxford English Dictionaries both define an island simply as ‘a piece of land completely surrounded by water’. In other words, islands are unambiguously defined by their coastlines, by the interplay between the land and the water, between closure and openness (Ronström, 2009).

When it comes to artificial islands, however, contours start to blur. An artificial island is commonly understood as ‘an island that has been constructed by people, rather than formed by natural means’ (en.wikipedia.org). Yet, to what extent is human intervention needed to make an island artificial? Are artificial islands purely human-made objects, or are they pre-existing natural forms modified by humans? A brief search on Google, or even a simple glance at Wikipedia’s list of artificial islands, reveals a variety of typologies, shapes and sizes: from the self-proclaimed principality of Sealand, a 0,004 km² concrete platform off the coast of Suffolk, UK (see Figures 1a and 1b), to the 970 km² Flevopolder in the Netherlands, the largest island formed by reclaimed land in the world (Figure 2). Artificial islands can thus support a single building and entire cities alike. They can be inhabited or uninhabited. They can be permanent or temporary and they can involve both human and natural interventions, materials and processes. And while the shapes of their coastlines can be akin to those of their natural counterparts, in most cases artificial islands bear the imprint of human action: from the minimalist design of oil drilling platform-islands (e.g. Northstar, off Prudhoe Bay in Alaska), or the straight lines of airport islands such as Kansai in Japan and their modernist aesthetics of efficiency, to the playful fractal shapes of Dubai’s Palms and their likes.

Figures 1a and 1b: The ‘Principality of Sealand’, and its location off the coast of Britain. *Sources*: Colchester Gazette and Daily Mail.

Figure 2: The Dutch island province of Flevoland, close to the capital city of Amsterdam. *Source*: Google Maps.

More intriguingly, as a category, artificial islands encompass both islands created by humans ‘from scratch’ and pre-existing ‘quasi-islands’ – such as peninsulas, submerged seas or seamounts - transformed into islands through human interventions such as land reclamation, extension of pre-existing islands, or canal construction. The former category includes instances ranging from steel and concrete platforms like Sealand solidly anchored to the ocean floor, to the islands off the coast of Dubai made of sand pumped up from it, and Montreal’s Île Notre-Dame constructed over 10 months out of 15 million tonnes of rock excavated for the city’s underground metro system to celebrate Expo ’67 (Fischer, 2012: 38). One of the earliest references to wholly human-made artificial islands, however, comes to us from the Roman writer Pliny the Elder who noted in *Natural History* (47 AD) that Friesian communities (now in the north east of the Netherlands) built artificial mounds in order to establish communities safe from the tidal vagaries of the North Sea (Fischer 2012).

The other category, that of pre-existing quasi-islands turned into islands, is just as varied. Once again, Pliny writes of the channels of ancient Leukas, a peninsula on the Greek Ionian coast that was made into an island by the Corinthians in the seventh century BC (Fischer, 2012: 36-37). Turning to modern times, while the Peloponnese is still considered a peninsula, it technically became an island in 1893, when it was cut off from mainland Greece through the excavation of the Canal of Corinth. Likewise, and yet at a totally different scale, the fluvial island of Donauinsel in central Vienna came into being in the Danube when a canal was dug as part of a flood prevention system in 1970. Artificial islands can also be manufactured through other techniques, such as flooding. For example, Barro Colorado Island was formed when the waters of the Chagres River in the Panama Canal were dammed to form an artificial lake in 1913. When the waters rose, they flooded much of the existing tropical forest, whilst leaving certain hilltops as islands in the middle of the lake — the reverse of reclaimed islands.

Attempting a definition of an artificial island thus opens up a broader ontological question: where do we set the boundaries between natural and human-made? No matter what their shape or level of human intervention, as a category artificial islands transcend modern dualisms and invite us to think beyond ‘nature’ and ‘culture’ (or technology) as separate ontological zones. Bruno Latour (1993) calls the continuous effort to create such ontological zones ‘purification’ and ascribes it to a distinctively western modern way of thinking, which in a way parallels the process of ‘conceptual islanding’ described by John Gillis. Western culture, Gillis argues, ‘not only thinks about islands, but thinks *with* them. … Western thought has always preferred to assign meaning to nearly bounded, insulated things, regarding that which lies between as a void’ (2004: 1).

This modernist tendency to ‘think *with’* islands touches upon the intrinsic appeal of the ‘insular imagination’. The geopolitical rubric of modernity is literally grounded in the idea of a stable geophysical order in which territorial states can make claims to distinct portions of the earth’s terrestrial environment. Later interventions in international law both championed the idea of the self-determination of peoples and their inalienable rights to live within recognized boundaries. While communities have experienced the violence of invasion and domestic upheavals, which might have altered those boundaries and corresponding ‘lines on the map’, it was nonetheless assumed that the modern nation-state could adjust and accommodate territorial change including ownership of islands (Steinberg, 2005). Underpinning all this was the idea that the earth’s surface would fall under the jurisdiction of one country or another and that those ‘territories’ were stable and identifiable (Elden, 2013).

While international legal and political theory and practice can and does accommodate territorial change, it has faced challenges, which make relationships between territory, fixity and authority contingent. It is a delightful irony that artificial islands openly challenge this ‘insular’ way of geo-political thinking. They seem to float precisely in that ‘void’ or ‘grey area’ surrounding Gillis’ reassuring ‘islands of the mind’. Disrupting the conceptual boundaries between nature and technology, artificial islands call into question the very idea of ‘nature’ and the geographical distribution of ‘territory’. In William Cronon’s words, they remind us that ‘“nature” is not nearly so natural as it seems’ (1995: 25). Artificial islands call for non-dualistic frameworks and new vocabularies to describe and make sense of our contemporary world and our relationship with the environment (Whatmore, 2002). In a way, they give visual and material shape to post-environmentalist attempts to replace ‘stable taxonomies, fixed boundaries, and essential identities with more flexible, hybrid and permeable categories actively generated through performance and practice’ (Cosgrove, 2008: 1863). The very thing that we might think of as fixed – such as the distinction between land and sea – turns out to challenge our modern geographical/geopolitical imagination of boundaries, distinctions and fixities (Agnew, 2004).

Performance and practice destabilise the idea of nature as a fixed entity and of geographical objects (like mountains, islands and rivers) as the most permanent and immutable of all objects (Spkyman, 1942; Farinelli, 1992). A splendid example of hybrid geographical object generated through ‘performance and practice’ is Tiber island in Rome (See Figure 3). Tradition holds that the nucleus of this small boat-shaped island was formed by the grain from the fields of the Tarquins, which was thrown into the Tiber in great quantities after the expulsion of the kings. ‘There is even now a conspicuous monument of what happened on that occasion’, writes Dionysius of Alicarnassus, ‘… an island of goodly size consecrated to Aesculapius and washed on all sides by the river; an island which was formed, they say, out of the heap of rotten straw and was further enlarged by the silt which the river kept adding’ (Dion. V.13; see also Liv. II.5). In the second part of the first century AD, Tiber island was modelled to resemble a ship. Walls were put around the island; travertine facing was added by the banks to resemble a prow and stern, and an obelisk was erected in the midst of it in the fashion of a mast.

Figure 3: Isola Tiberina (Tiber Island), the only island on the Tiber River, in Rome, Italy. Source: [www.zero.eu](http://www.zero.eu)

Other examples of artificial islands built through slow collaborations between human and non-human action are found the world over. For example, the islet of Our Lady of the Rocksoff the coast of Perast in Montenegro (see Figure 4) was formed by a pre-existing bulwark of rocks and by the carcasses of sunken ships, though local tradition ascribes its formation to the progressive accumulation of stones left by pilgrims over the centuries ([www.montenegro.com](http://www.montenegro.com)). Instances of reefs, atolls, and even icebergs transformed into proper or ‘floating islands’ by local inhabitants and military planners span the Arctic, Atlantic, Pacific and Indian Oceans. In the midst of the Second World War, plans were hatched under the moniker Project Habakkuk to construct an artificial aircraft carrier/landing strip somewhere in the North Atlantic Ocean in order to aid and abet the flying range of Allied airplanes (cited in Olovsson, 2015: 34). Intriguingly, the plan involved a mixture of wood pulp and ice to construct the object concerned. The plan was eventually abandoned on cost grounds in 1943 but it did not prevent further interest in developing ‘floating islands’ for the purpose of accruing wartime advantage. Later, with the onset of the Cold War, floating icebergs were used as sites for scientific stations and landing strips, as the Soviet and American navies eagerly accumulated scientific knowledge about the Arctic Ocean and the polar atmosphere (Dodds and Nuttall 2015).

# Figure 4: Gospa od Škrpjela (Our Lady of the Rocks), Montenegro. Source: Scott Liddell, Edinburgh, U.K.

Artificiality takes on a more troubling presence when our geographical focus shifts away from projects and plans attempting to ‘game’ geographical forces and objects for strategic advantage. What happens when appeals to the artificial are rooted in long-term resilience even survival? The people of Langa Langa Lagoon and Lau Lagoon in Malaita, Solomon Islands, built about 60 artificial islands on the reef for defensive purposes (Stanley, 1999: 895). Today, as rising sea levels threaten the Maldives, the lowest country in the world at just two to three metres above the sea, plans are under discussion for a series of floating islands made of concrete and polystyrene foam (dailymail.co.uk). Named the Five Lagoons Project, the floating islands are intended to offer a partial solution to the prospect of further sea level rise. Working with a Dutch company, Dutch Docklands, the 7.5 million m2 project envisages a series of developments including executive villas, golf course, hotel complex, and homes for residents of the country’s capital city, Malé. The US$500 million venture is premised on the islands being anchored to the seabed after being towed from India and the Middle East where they will be built. And if that was not sufficient, we can also point to the remarkable development where a reclaimed island called Hulhumale in the Maldives was created between 1997-2002 involving a Belgian joint venture company, Singapore consultants, Japanese funding and Dutch reclamation technology (see Figure 5).

Figure 5: Hulhumale island, Maldives, with the capital city atoll of Malé in the background. *Source*: Getty Images.

In the case of low-lying island states, in the advent of fears that their worlds will simply ‘drown’, the geopolitical order of modernity faces elemental challenges. Becoming artificial not only makes sense in terms of human endurance but also points to the legal and political rights that accrue to recognized nation-states with accompanying sovereign rights over resources and territories. Do states lose their sovereign rights when there is no longer, for example, a land territory capable of generating offshore rights to resources such as fishing and minerals? What happens when there is no longer a geographical baseline to establish a territorial sea, let alone an exclusive economic zone? Can the artificial island take the place of a previous geological entity identified as an island? In order to answer these questions, we need to turn to the way in which international maritime law intervenes in and on the natural and artificial geographies of the earth (Elden, 2013).

**Legalizing Artificial Islands**

Islands, natural and artificial, have long attracted contention and dispute and acted as a major source of tension between neighbouring coastal states, and extra-territorial parties who might be simply navigating through the waters off disputed islands. Parties can and do dispute not only the formal sovereignty of islands but also argue over the physical and human-assisted capacity of islands to generate entitlements to maritime resources on the seabed and in the water column. Japan, for example, has also experimented in fast growing coral in order to enhance the human colonisation of the remote rocks called Okinotorishima (literally: Remote Bird Island), located some 1,900 km south west of Tokyo (Sakhuja, 2011) (Figure 6). Artificial islands and structures add further complexity and frisson, as countries engage in artificial island building projects in highly disputed waters such as the South China Sea. What makes these disputes over artificial island-building so vexatious is whether submarine topography can be augmented with other materials, both natural and artificial, in order to terra-form. To paraphrase, D. H. Lawrence, we have examples of ‘countries that love (artificial) islands’, and none more so than China, which has invested heavily in dredging and reclamation projects designed to augment and build upon subterranean elevations.

Figure 6: Okinotorishima atoll with its three islets encased in concrete, plus constructed observation platform on stilts, Japan. *Source*: [www.seenthis.net](http://www.seenthis.net)

The United Nations Law of the Sea Convention (UNCLOS) (1982, entry into force 1994) identifies three features that are relevant to any discussion of artificial islands: low tide elevation (LTE), rock and island. A LTE is a landmass which is only above the waterline at low tide and thus submerged during high tide. If located outside the territorial sea of a coastal state (up 12 nautical miles from the baseline), it is not capable of generating a territorial sea and an exclusive economic zone. A rock, however, is different from a LTE because it is permanently exposed but is not capable of accommodating human or economic life without intervention. While it is possible for a ‘rock’ to generate entitlement to a territorial sea, it generates neither an exclusive economic zone (EEZ) nor acquires continental shelf rights. An example would be the uninhabited islet of Rockall in the North Atlantic Ocean, which was incorporated by the UK in 1955. Ireland continues to contest the UK’s claim to the rock and the 12 nautical mile sea surrounding it. An island, unlike a rock, can sustain human and economic life and is entitled to a territorial sea, a contiguous zone, an EEZ and continental shelf rights.

In international legal terms, an artificial island is not defined explicitly by UNCLOS but it is reasonable to conclude that it would fail the test posed by Article 121, ‘An island is a naturally formed area of land, surrounded by water, which is above water at high tide’. The expression ‘naturally formed’ is pivotal and in Article 60, the Convention makes it clear that ‘artificial islands, installations and structures do not possess the status of islands’. Artificial islands, even if composed of natural objects such as sand, silt, rock and organic matter rather than concrete and steel, cannot transmogrify into ‘natural islands’. What counts is the process rather than the materiality of island formation, and whether as such earthly rather than human forces have been involved in their genesis. The United States, in particular, was instrumental in ensuring that artificial islands (such as the self-styled Principality of Sealand in the North Sea), were not granted any maritime rights, throughout the tortuous negotiations over UNCLOS in the 1970s.

The most dramatic example of artificial island building projects is to be found in the disputed waters of the South China Sea. A semi-enclosed sea, the reefs, shoals, cays, rocks and low tide elevations that litter its waters are claimed and counter-claimed by a medley of states including Brunei, China (and Taiwan), Indonesia, Malaysia, the Philippines and Vietnam. In terms of scale and extent, China’s activities continue to attract the lion’s share of legal and media interest. Invoking historic rights to the South China Sea, and developing maps that depict what is termed the ‘Nine dash line’, now ‘Ten dash line’, the Chinese authorities contend that the country is asserting its legal entitlements (Kazianis, 2014). Hundreds of millions of tons of sand, silt, coral and rock have been dumped on coral reefs and low tide elevations for the express purpose of creating new ‘islands’ and in some cases so obliterating the natural topography, making it difficult to ascertain the pre-history of the reef and shoal. The reclamation is been carried out by a fleet of advanced dredgers. Between 2006 and 2016, it has been estimated that Chinese construction teams might have been responsible for around 8 million m2 of land reclamation (Stephens, 2016).

Such reclamation work is essentially an act of geopolitical assertion and suasion: the reclaimed islands are bristling with port and communication services, landing strips and search and rescue facilities. Once established, the islands enable further Chinese air and maritime force projection and harassment of other parties conducting fishing and other activities in the region. Establishing small mainly military communities on these artificial islands is also designed to add further Chinese ‘presence’ in a sensitive region through which passes one third of the world’s commercial shipping by volume. Moreover, the ecosystems of the reefs and shoals concerned bear the indelible brunt of a calculated attempt to secure legal entitlements to the surrounding waters. Land reclamation as a process was designed to attract the legal entitlements noted in Articles 60 and 121.

In July 2016, the Tribunal established under the Law of the Sea Convention issued an arbitration award in the case of the South China Sea, involving China and the Philippines. The Tribunal concluded that China’s historic rights and ‘Nine dash line’ did not comply with UNCLOS and exceeds any marine entitlements that the country is capable of possessing. As the Tribunal concluded:

305. With respect to low-tide elevations, several points necessarily follow from this pair of definitions. First, the inclusion of the term “naturally formed” in the definition of both a low-tide elevation and an island indicates that the status of a feature is to be evaluated on the basis of its natural condition. As a matter of law, human modification cannot change the seabed into a low-tide elevation or a low-tide elevation into an island. A low-tide elevation will remain a low-tide elevation under the Convention, regardless of the scale of the island or installation built atop it.

306. This point raises particular considerations in the present case. Many of the features in the South China Sea have been subjected to substantial human modification as large islands with installations and airstrips have been constructed on top of the coral reefs. In some cases, it would likely no longer be possible to directly observe the original status of the feature, as the contours of the reef platform have been entirely buried by millions of tons of landfill and concrete. In such circumstances, the Tribunal considers that the Convention requires that the status of a feature be ascertained on the basis of its earlier, natural condition, prior to the onset of significant human modification. The Tribunal will therefore reach its decision on the basis of the best available evidence of the previous status of what are now heavily modified coral reefs (United Nations 2016).

Modification does not make an island; rocks are rocks regardless of how hard one tries to ‘scale jump’ and experiment with earth moving and human habitation. That the high tide features in the highly disputed Spratly Islands (See Figure 7) were ‘rocks’ and thus, under the provisions of Article 121, are not capable of generating more than a 12 nautical mile (22.2 km) territorial sea.

Figure 7: Land reclamation by China underway at Hughes Reef, Spratly Islands, in the South China Sea. *Source*: CSIS/Asia Maritime Transparency Initiative.

The Tribunal also noted something rather significant for how we might think of artificial islands and their presence within the exclusive economic zones of other coastal states. In reflecting on China’s construction of artificial islands, installations and structures on Hughes Reef, Mischief Reef, and Subi Reef, the Tribunal found that the scale of Chinese activity interfered with the sovereign rights of the Philippines. As low tide elevations, the three reefs were incapable of being appropriated by another party and thus were integral to the continental shelf on which Philippines enjoyed sovereign rights. China did not receive formal authorisation from the Philippines for its construction and reclamation activities. China is, under UNCLOS, allowed to have a presence in the exclusive economic zones and continental shelf regions of other coastal states as the jurisdiction of coastal states over artificial islands and structures in these areas is not without its limits.

Third parties can build installations and structures on the continental shelf of coastal states provided that they do ‘not interfere with the exercise of the rights of the coastal state’ over its resources (Stephens 2016). The interplay between Articles 56 and 60 is significant because it qualifies the overwhelming right of the coastal state to manage and regulate artificial islands and structures within its EEZ and continental shelf region. Foreign militaries are entitled to develop, for example, discreet installations and structures, but what they are not entitled to do is to create artificial islands with the explicit purpose of appropriating natural resources and acquiring sovereign rights. And it is important to bear in mind that, when UNCLOS was negotiated in the 1970s, the United States – which is not a party to UNCLOS – was nevertheless adamant in retaining extra-territorial entitlements to construct military assets without needing the formal consent of coastal states. The rights of coastal states over their EEZs and continental shelf are limited and extra-territorial parties including militaries are allowed to conduct operations in those spaces.

Thus, in their detailed 2016 ruling on the South China Arbitration, the Tribunal ruled that China’s artificial island building activities in the Philippines EEZ were not lawful, and indeed intended to interfere with the ability of the coastal state in question to exercise its sovereign rights in areas such as fishing and oil and gas exploration. China stood accused of worsening the situation by accelerating its dredging and reclamation programme and aggravating marine environmental disruption. Yet, it is a moot point as to whether this arbitration will be respected by China. Constructing artificial islands is not illegal, but what the Tribunal made clear, however, is that scale and intent matters. (Xinhua News, 2016).

The international legalities attached to artificial islands are part of an intriguing story of how law, geophysics and geopolitics intersect with one another. ‘Natural islands’ are not artificial, they are visible, and they are as a consequence assumed to be above sea level. Earlier manifestation of the law of the sea did not distinguish terribly carefully between artificial and natural islands. As technological capacities including land reclamation and dredging shifted alongside the strategic/resource projection of coastal states and third parties, so international legal arguments followed. Since the 1970s far greater attention has been given to an array of artificial islands and structures including oil rigs, ships, and other mobile and immobile platforms and how their establishment and usage raises issues for how the entitlements and rights of coastal states and third parties are affected. International maritime law, overall, struggles with the interface between artificial and natural, as artificial intervention might be necessary to ensure that an ‘island’ does not lose its status and entitlements.

**Dystopias and utopias: artificial islands and the geographical imagination**

The contested geopolitics of the South China Sea provides a particularly jaundiced view of why the creation of islands as opposed to rocks is cloaked in promissory potential. International maritime law can be ‘gamed’ even if artificial islands call into question the matter of which they are made, and the way in which they are imagined. We might regard recent developments in the South China Sea as decidedly dystopian, as rival parties seek to create and stabilize islands and their communities in order to establish a ‘baseline’ for sovereign rights to the sea and its resources to thrive.

Circulating between dystopian and utopian registers lies an extraordinary range of possibilities and responses to the artificial island. In between the romantic origins of Montenegro’s Our Lady of the Rocks, the contested present of the South China Sea and the apocalyptic futures impinging on the Maldivian atolls, float a number of other projects such as ‘unwanted artificial islands’; or rather, islands made of unwanted matter. Thilafushi, an island created in the early 1990s as Malé’s municipal landfill, shares little with the edenic imageries of the neighbouring islands and the fancy designs of prospective floating golf courses and luxury marinas. It also shares little with the artificial islands of the South China Sea for that matter. But in the making of more everyday geographies, the Maldives’ ‘rubbish island’ receives more than 330 tonnes of waste daily, which are constantly transforming its size and morphology. Not only do Thilafushi’s mountains of garbage keep reaching higher and higher altitudes, but it has been calculated that the size of the island itself is rapidly increasing in surface area (Ramesh, 2009). The island’s area now encompasses some 120 acres (0.5 km2) and will continue to expand thereafter because of the supply of rubbish is not likely to abate in the short to medium term (see Figure 8).

Figure 8: The garbage island of Thilafushi, Maldives. *Source*: Ahmed Shan/ EcoCare Maldives.

While Thilafushi is deemed the largest ‘rubbish island’ in the world, a far larger ‘rubbish archipelago’ floats in the Pacific Ocean. The ‘Great Pacific Garbage Patch’, or ‘Pacific Trash Vortex’, is an enormous collection of flotsam accruing in the circular cur­rents of the Pacific Gyre north of the Hawaiian Archipelago. ‘Estimated at one hundred million tons in floating mass, the mostly non-biodegradable waste in the North Pacific Gyre coagulates in suspended animation’ (Jackson, 2012: 209). Indeed, scientists have likened it to a living organism, moving around ‘like a big animal without a leash’ and causing every year the death of more than a million seabirds and over one hundred thousand marine mammals (Marks, 2008). Whilst difficult to quantify, estimates of size range from 700,000 km2 (about the size of Borneo) to more than 15 million km2, or, in some media reports, up to ‘twice the size of the continental United States’ (ibid.). While not visible from outer space, and diffuse in nature, it is suggestive nonetheless that critics have sought refuge in an insular vocabulary in order to mobilise efforts to clean up and reduce the ‘garbage patch’.

Sea plastic pollution, intriguingly, has been recently imagined in the form of a ‘Recycled Island’. Over the past five years, Dutch architects and engineers have been exploring the possibility of turning plastic garbage polluting seas, coasts and estuaries into floating urban parks and residential islands. A prototype is being built in Rotterdam’s bay:

The prototype should be built from hollow building blocks made by recycling the plastic waste from coastlines. These hollow elements will be the components from which Recycled Island will be constructed. … The creation of the prototype will illustrate the potential of (sea) plastic recycling, flood-proof living, and sustainable and self-sufficient housing. The prototype can eventually be on display in any major (harbour) city (recycledisland.com).

Described by critics as ‘a doomed modernist symbol of a myopic narrative that attempts to balance capitalist growth with environmental control’ (Jackson, 2012: 208), Recycled Island betrays a deeper anxiety, that is, western culture’s incapacity to think ‘beyond islands’. What better form to express control over pollution than the apparently self-bounded space of an island? Inherent in the island, Baldacchino observes, is an obsession to control and fix – a tendency we have already described as emblematic of the geopolitics of modernity. ‘To embrace an island is to embrace something that is finite, that may be encapsulated by human strategy, design, or desire. … Being geographically defined and circular, an island is easier to hold, to own, to manage or to manipulate, to embrace and caress’ (Baldacchino, 2005: 247). And it also easier to reconcile with a geopolitical imagination that is premised on the fantasy of bounded territories, fixed spaces and lines on the map that neatly articulate where one jurisdiction begins and another ends. While the existence of trans-national pollution clearly reminds us that this territorial fixation is not adequate, compacted solid rubbish facilitate this fantastic projection.

Artificial islands exacerbate all these decidedly modernistic characteristics. Alongside natural islands transformed into prisons and *lazzaretti*, there is a history of artificial dystopian islands and islets manufactured to contain and control external agents and potential threats to the everyday lives of urban societies including their rubbish, but also suspicious humans. The Japanese island of Dejima in Nagasaki Bay (see Figure 9), for example, was constructed in 1634 to contain Portuguese and then Dutch merchants who were forbidden to enter into direct contact with city-dwellers as part of the Edo Period’s self-imposed isolationist policy; whereas Ellis Island in New York was created to serve as an immigration centre in the late 1800s and early 1900s, becoming in effect the portal to the United States of America (Fischer 2012: 37-38). Bio-political projects were frequently geo-political projects in the sense that the control of alien populations, refugees and displaced peoples was fundamentally spatial and territorial. Offshoring, however, has also become the preferred strategy of the wealthy as money travels away from the metropolitan territory in favour of a network of international financial outputs many of which being naturally formed islands with their decidedly artificial economies (Sheller, 2009; Urry, 2014).

Figure 9: Enclave of Dejima, Nagasaki Bay. *Source*: <http://kelliinjapan.blogspot.ca/2014/02/nagasaki-japans-isolation-period.html>

While some have worried about the bio-political and geo-political purpose of human-made islands, others have sought hope in the manufacturing of communal virtue. Thomas More’s Utopia itself was an artificial island (see Figure 10). Utopia, More explains, was originally attached to the mainland, but its king Utopus cut it off by digging a canal, so that its inhabitants could attain civic perfection. The story is likely to have been inspired by the ancient peninsula of Mount Athos, in the Aegean. According to Herodotus, after a massive shipwreck occurred off its stormy point in 492 BC, Xerxes, the king of the Persians, resolved to cut a canal on the neck of the peninsula, in order to remove the need for its circumnavigation. The canal collapsed soon after its excavation, leaving no visible trace. From being a temporary island, Athos returned to its original peninsular status. Nonetheless, the memory of its insular past survived through the centuries both through the secluded life of the Christian monks who have continuously inhabited Athos since the ninth century and through literary and graphic representations. Late Byzantine authors described the peninsula as a paradise on earth; Western Renaissance mapmakers portrayed it in an oval insular shape, tenuously attached to the mainland through a thin isthmus, or even totally encircled by the sea, whereas the ‘non-presence’ of Xerxes’ canal is still marked on modern maps (della Dora, 2011: 56-83). Strikingly, an island ‘tenuously linked’ would still appear to be a better prospect than the fate faced by low-lying islands in the Pacific and Indian Oceans.

Figure 10: The island of Utopia, after More (1516). *Source*: Wikipedia commons.

As Baldacchino notes, ‘a significant component of the contemporary intoxicating lure or fascination of islands has to do with the fact that they suggest themselves as *tabulae rasae*: potential laboratories for any conceivable human project, in thought or in action’ (Baldacchino, 2007: 166). Intriguingly, today similar experimental tropes pervade advertisements and promotional videos of the new artificial islands in the Arabian Gulf, which are in effect giant luxury gated communities. A 2013 advert of Palm Jumeirah properties in Dubai, for example, markets the island as a social experiment that combines ‘community living’ with protection from perceived external threats: ‘Community living is the trend of the moment, with people all over the world relocating to gated or managed communities. ... People move towards community living for various reasons: safety and security, leisure and recreation facilities, convenience and exclusivity’ (www.propertyfinder.ae). Unlike the oft-cited tendency to seek solace in the vertical (Graham, 2016), the artificiality of the horizontal is being appealed to either a proverbial ‘ground zero’ or a form of habitual regeneration.

Completed in 2006, Palm Jumeirah is the first and only currently inhabited of Dubai’s three artificial palm-shaped islands originally planned (see Figure 11). The other projects were delayed or halted due to the collapse of property’s prices following the 2008 global financial crisis. A larger palm, Jebel Ali, is still under construction, whereas the third palm, Deira, originally designed to accommodate a population of 1.7 million by 2020, was scaled down to a remarkably more modest ‘Deira Island’. Measuring 5 by 5 km and connected to the mainland by a 300-m bridge, Jumeirah is nonetheless already one of the world’s largest artificial islands (Fischer, 2012: 38). Over 500 families have already moved onto the island and become part of its exclusive experimental community.

Figure 11: Palm Island, Dubai. *Source*: Wikimedia Commons.

Recent reporting suggests that at least one of Dubai’s developments, The World, a complex of some 300 private artificial islands arranged in the shape of a world map and located 4 km off the coast, might be slipping back into the sea. The sand does not appear up to the task in question and the channels between the islands are collapsing. Remarkably, the company Dutch Docklands has sensed a business opportunity in the event that sand nourishment proves inadequate. They have, in 2016, offered up to the powerful Nakheel development company the prospect of building the ‘Floating Proverb’, a series of 89 floating islands that will in effect continue to trade in the proposition that the territorial waters off Dubai can serve as a lively site of island experimentation. It remains a plan at this stage but might prosper as ‘The World’ project flounders in the water.

At a smaller scale, the Dutch Recycled Islands are also being imagined as social and environmental experiments. Intercepted by passive litter traps set on the estuaries of rivers, ‘the retrieved plastic is recycled to give new value to the river. With the plastics we make floating blocks to form new nature landscapes; floating parks’. Intriguingly, variants on the project echo the ‘social experiment’ vision promoted by Dubai and include ‘self-sufficient’, ‘sustainable’ and ‘flood-proof’ habitats built around floating villas and family housing ([www.recycledisland.com](http://www.recycledisland.com)). A do-it-yourself version has already been built off the coast of Yucatan, Mexico. It took British artist Richart Sowa seven years and 150,000 recycled bottles to craft his own floating paradise, Joyxee island (see Figure 12).

Figure 12: Joyxee, the floating island, made of and from thrash. Source: Richart Sowa/ <https://www.youtube.com/watch?v=GnLhWpy_nqI>

Another project, Orsos, offers a choice of ‘living together or alone’ by changeable configurations of floating islands assembled along customized bridge systems. ‘**Island owners can use the park, for example, for an all year-round base station, with the summer months, however, spent alone in a remote bay. Hotel chains with a second bridge system can for example avoid rainy seasons and offer their guests an all year-round season’ (orsosisland.com).** Orsos islands synthesize the two island paradigms pioneered by Dubai: the Palms’ ‘experimental’ communities and the seclusion of The World’s islands. Each island in The World is available for purchase and transformation into one’s private luxury Eden. Spectacular as seen from above, yet invisible from ground level, they are perhaps one of the most dramatic fulfillments of neoliberal fantasies, and of their sinking (Jackson and della Dora, 2009). **Orsos combines these two visions – exclusive community living and individualism – by way of mobility**:

The mobility of the Island, which is an excellent characteristic combined with all its unique and special features, allows the settling in seasonally restricted areas with difficult weather conditions, such as the Caribbean known for its hurricanes, to relocate easily. The mobility assures the owner of safety and long-term functionality. Compared to a mainland real estate, the Islands retain their value long term and are cost-effective (orsosisland.com).

What we are left with here is an incredibly diverse picture of how and where artificial islands have been put to work. For artists, however, this might also include opportunities to imagine artificial islands not as securitized archipelagos of privilege and wealth but as something rather than creative even disruptive to economic and political norms. Alex Hartley’s Nowhereisland (<http://nowhereisland.org>) (see Figures 13a and 13b), for example, involved the discovery of a new island in the Svalbard archipelago in the Arctic. In 2012, a group of artists and writers organised to have the artificial island towed into international waters where it was declared as a new nation-state. After its journey back to UK waters, the island was dismantled in September 2013 and over 20,000 people took up the opportunity to sign up as ‘citizens of Nowhereisland’ – a contemporary Ou-topia. In a playful way, Hartley and his artistic team asked questions about how modern understandings of citizenship and territory are co-constituted by one another.

Figure 13a and 13b: Nowhereisland and ‘Embassy’ on Furzy cliff in Weymouth, UK, ready for the arrival of the Island on 25 July 2012. *Sources*: Alex Hartley/ <https://gettingtoyoutidende.wordpress.com/2012/09/03/alex-hartley-nowhereisland-3/> and <https://www.pinterest.com/source/channelhotel.co.uk/>

Predating Hartley’s vision, in 1970 Robert Smithson, author of the famous Spiral Jetty in Utah, conjured up a *Floating island to travel around Manhattan island* composed of a tug boat and barge planted with trees and rocks. Smithson’s unrealized project was brought to life posthumously, 32 years after his death, by a non-profit artist organisation and the Whitney Museum. For some days in September 2005, this green artificial island orbited around Manhattan’s artificial landscape of steel, glass and concrete. *Floating Island* is no less subversive than Nowhere Island. If Hartley’s island displaces territory, Smithson’s displaces nature. The trees for his mobile miniature landscape, Smithson proposed, should be removed from Central Park and transferred to the barge. His project is ‘a reversal of the island garden in the city, which moves to encircle the city’ (Yusoff and Gabrys, 2006: 445). In reversing the relationship between ‘inside’ and ‘outside’, Smithson’s mobile artificial island once again calls into question the boundaries between natural and artificial. (See Figure 14).

Figure 14: Smithson’s floating island garden idea brought to life by encircling Manhattan, USA. *Source*: <http://www.balmori.com/portfolio/smithson-floating-island>

The project has been likened to ‘voyages of discovery and loss, beginning with the Ark itself, which also put nature into a boat’ (<http://nymag.com/guides/fallpreview/2005/art/12862/>). However, there is also a dystopian side to it. Barges are daily loaded with garbage from Manhattan and the surrounding areas. ‘To displace a miniature version of Central Park to a floating barge is to suggest the eventual slump of that park, and its possible disposability’ (Yusoff and Gabrys, 2006: 447) – the reversal of the Dutch Recycled Island parks.

In their apparent playfulness, artificial islands can thus be subversive icons of the anthropocene. At the same time, however, it is difficult not to conclude that for the rich and privileged the ultimate expression of earthly engineering is now living on one’s own artificial island: a floating artificial island to be sure (Miéville, 2007; Graham, 2016). If we cannot get away from humanity by going either up and or underground terrestrial earth, then the only other choice baring space and underwater living appears to be to inhabit something human-made. As the anthropologist Michael Taussig (1999) might term it, artificial island constructions are a very ‘public secret’: communities like Orsos proffer a public vision of safety and privacy, rather than something that cannot be articulated in isolation and insulation from the rest of humanity.

**Conclusion**

The artificial island as a feature is extraordinarily varied and foregrounds both the more-than-human qualities of earthly existence, as well as the sorts of phenomena that can materialise because of earthly forces themselves. Lakes, marshes and wetlands are capable of producing their own floating ‘artificial islands’ of mud, peat and aquatic communities. When sediment load and physical contours shift, rivers can manufacture their own islands of runoff and sand, some of which may endure or subsequently be overwhelmed by storms or rising water. Pliny the Elder referred to such changes in the physical environment as ‘dancing islands’ (cited in Fischer, 2012: 36), a term which delightfully pulls out the performativity, even playfulness, of Planet Earth. Perhaps, Smithson had Pliny in mind when he devised his plan for Floating Island.

Culturally, fancy artificial islands seem to be a typically twenty-first-century trend. Over the past decade, the uses, meanings and aesthetics of large artificial islands have shifted from pragmatic utilitarianism (e.g. the addition of a strip of land to accommodate an airport or further cultivable land, or to protect coastlines from erosion) towards a global market of cultural icons and building speculation. Between 2001 and 2008 over twenty countries put forth spectacular artificial island projects -- from Qatar to Russia, from Thailand to Spain, from Korea to Slovenia, from the Netherlands to Bahamas (Jackson and della Dora, 2009). Only a very tiny percentage of such projects has materialized. And yet, the trend is continuing. The point is not the realisation of these islands, but the idea, or rather their iconicity: coming in the most bizarre and eye-catching shapes, the goal of these speculative islands is to capture international attention and set aspiring global cities (or even countries) under the world’s gaze, even if for a brief moment (Dematteis, 2001). As Bella Dicks notes, ‘it is the symbol, not the information; [it is the medium and not the message,] which has become the actual resource of late modern economies’ (2003: 34). As powerful cultural icons, artificial islands are key agents in contemporary global urban branding. One of the most glamorous recent examples of this speculative economy of ‘phantom islands’ is the UAE Real Madrid Resort Island, a $1 billion soccer-themed resort on the artificial Marjan Island, including a 10,000-seat stadium by the sea, residential and retail properties, a 450-room five-star hotel, a Real Madrid Museum, and not least, a hologram stadium. The licensing agreement was scrapped soon after the launch of the project in 2013, making the resort island an immaterial, ephemeral fantasy—or rather, a hologram of itself (Fattah and Duff, 2013).

On the other side of the spectrum is the solid concrete poured in tons over the contested rocks in the South China Sea. Geopolitically, any change in the physical landscape can provoke either expressions of anxiety or articulations of opportunism. We have for centuries accustomed ourselves, especially in the western geopolitical imagination, to thinking about the earth as stable backdrop to the serious business of politics, law and society. Where political discourse has described a ‘failing state’, for example, it has done so when its domestic structures are alleged to have been overwhelmed by civil war, disease, and disorder. Nation-states are artificial creations but their artificiality was grounded in appeals to the ‘natural borders’ of rivers, mountains, seas, and other earthly features. Artificial islands have been used to garner legal and political advantage from a system premised on the notion that the environment could be used to sustain a national community. But now we face increasingly the prospect of some island states looking to artificiality as a way of holding on to their resources, sovereignty and territory. If a state fails environmentally rather than geopolitically, then what happens to its resource claims if that ‘territory’ is simply submerged? Going artificial becomes a perfectly rational response to a world in the geopolitical world of the anthropocene, where the natural and artificial increasingly depend on one another (Dalby, 2017).

Artificial islands are thus one possible answer to the question: is there life after territory? Another might be to create artificial islands of humanity elsewhere. In the 1970s, futurists such as Carl Sagan imagined a world where human colonisation of Mars and even Venus might become a possibility. Intriguingly, ‘terraforming’, a word widely used by developers to describe the making of the artificial islands in the Gulf, was first coined in 1950 by American writer Jack Williamson and popularized by Sagan (Jackson and della Dora, 2011: 99). As concerns mount about global warming, population increase, pollution and resource depletion, it is poignant how popular culture is returning again to the subject of planets such as Mars and the moon as extra-terrestrial *tabulae rasae* for humanity. The motion picture *The Martian* (2015), for example, explores the colonisation of Mars and how huge efforts are made to bring a remaining ‘Martian’ back home to earth. While the film trades in the idea that earth is worth returning to, the premise of the film remains that alternative spaces are needed for humanity. The allure of island territory does indeed continue, albeit this time imagined being elsewhere (Murphy, 2013).

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